

REMARKS

Claims 1-27, 31, 32, and 37-46 are pending in the application. Claims 1-9, 12, 17, 18, 23-27, 37-42, 44, and 45 stand rejected. Claims 10, 11, 13-16, 19-22, 31, 32, 43, and 46 have been objected to. Claims 1-10, 12, 16, 19-22, 25, 32, and 46 have been amended. Claim 44 is canceled. Claims 47-58 have been added. Reconsideration and allowance of Claims 1-27, 31, 32, 37-43, and 45-58 in view of the above amendments and the following remarks is respectfully requested.

The Rejection of Claim 12 Under 35 U.S.C. §112, Second Paragraph

Claim 12 is rejected under 35 U.S.C. §112, second paragraph, as being indefinite. According to the Examiner, Claim 12 is an improper dependent claim because the scope of Claim 12, which is dependent on Claim 1, is outside the scope of Claim 1. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 12 has been rewritten in independent form.

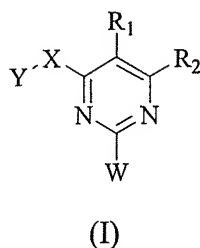
Because Claim 12 has simply been rewritten in independent form incorporating the recitations of Claim 1 as originally filed, no new matter is introduced.

The Rejection of Claims 1-3, 5, 9, 23-27, 40-42, 44, and 45 under 35 U.S.C. §102(b)

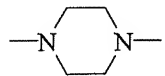
Claims 1-3, 5, 9, 23-27, 40-42, 44, and 45 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,251,900, issued to Kawashima et al. Withdrawal of the rejection is respectfully requested for the following reasons.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Claim 1 has been amended to clarify that X is not a direct link. In pertinent part, Claim 1 now recites a compound having the formula I:



wherein X is selected from the group consisting of

- (1) $-N(R^{1x})-$,
- (2) $-(CH_2)_m-C(R^{2x}, R^{3x})-N(R^{1x})-$,
- (3) $-O-$,
- (4) $-S-$,
- (5) $-SO-$,
- (6) $-SO_2-$,
- (7) $-C(R^{2x}, R^{3x})-$, and
- (8) ,

wherein R^{1x} , R^{2x} , and R^{3x} are selected from the group consisting of

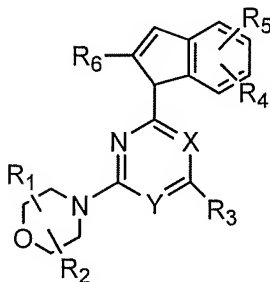
- (a) H,
- (b) substituted or unsubstituted C_1-C_6 -alkyl,
- (c) substituted or unsubstituted C_2-C_6 -alkenyl,
- (d) substituted or unsubstituted C_2-C_6 -alkynyl,
- (e) substituted or unsubstituted aryl,
- (f) substituted or unsubstituted heterocyclyl,
- (g) substituted or unsubstituted heteroaryl; and

m is 0, 1, 2, 3, or 4.

Claim 2, 3, 5, 9, 23-27, 40-42, and 45 depend from Claim 1.

Claim 44 is canceled.

The Kawashima reference teaches pyrimidine compounds with the following formula:



wherein X and Y respectively represent nitrogen atom or one of them represents nitrogen atom and the other represents C-R₇, wherein R₇ represents hydrogen or halogen atom. In contrast to the claimed invention, in which Y is attached to the pyrimidine ring through a X link, in the compounds taught by the reference, R₃, benzimidazolyl, and substituted morpholino are directly attached to the pyrimidine ring.

Because Claim 1 has been amended to recite a compound wherein Y group is attached to pyrimidine ring through X (not a direct link), the Kawashima reference fails to exactly describe the invention as now claimed, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

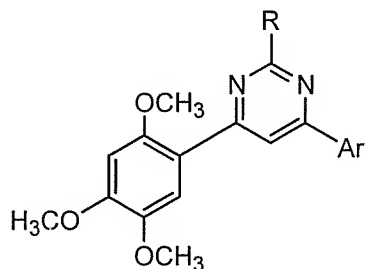
Furthermore, the Kawashima reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1, 2, 4, 5, 7-9, 23-27, 40 and 41 under 35 U.S.C. §102(b)

Claims 1, 2, 4, 5, 7-9, 23-27, 40 and 41 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,786,355, issued to Konno et al. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (i.e., X is not a direct link). Claims 2, 4, 5, 7-9, 23-27, 40, and 41 depend from Claim 1.

The Konno reference teaches 2,4-aryl-pyrimidine compounds with the following formula:



wherein R represents a heterocyclic ring, and Ar represents a phenyl, naphthyl or aromatic heterocyclic group. In contrast to the claimed invention, in which Y is attached to the 4 or 6 position of pyrimidine ring through a X link, the compounds taught by the Konno reference have Ar and 2,4,5-methoxy phenyl groups directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a compound wherein Y group is attached to pyrimidine ring through X (not a direct link), the Konno reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

Furthermore, the Konno reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

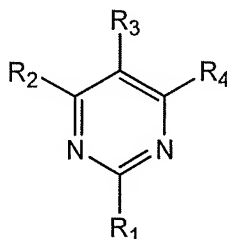
The Rejection of Claims 1-3, 5, 9, 23-27, 40-42, 44 and 45 under 35 U.S.C. §102(b)

Claims 1-3, 5, 9, 23-27, 40-42, 44 and 45 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,929,726, issued to Strekowski et al. Withdrawal of the rejection is respectfully requested for the following reasons.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X. Claims 2, 3, 5, 9, 23-27, 40-42, and 45 depend from Claim 1. Claim 44 has been canceled.

The Strekowski reference teaches pyrimidine compounds substituted with benzimidazolyl and morpholino with the following formula:



wherein R₁, R₂, R₃, and R₄ are hydrogen, halogen, alkyl, mercaptyl, alkoxy, alkenyl, alkynyl, aromatic or heteroaromatic groups. In contrast to the claimed invention, in which Y is attached to the 4 or 6 positions of the pyrimidine ring through a X link, the compounds disclosed by the Strekowski reference have R₂ and R₄ directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a compound wherein Y group is attached to the pyrimidine ring through X (not a direct link), the Strekowski reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

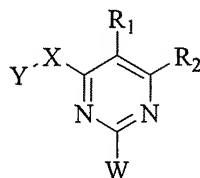
Furthermore, the Strekowski reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1-8, 23, 40, 42 and 44 Under 35 U.S.C. §102(b)

Claims 1-8, 23, 40, 42 and 44 are rejected under 35 U.S.C. §102(b) as being anticipated by DE 2341925, issued to Narr et al. Withdrawal of the rejection is respectfully requested for the following reasons.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

As amended, Claim 1 is directed to a pyrimidine compound having a formula I,

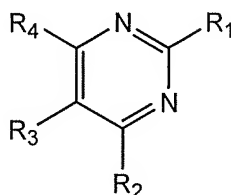


(I)

wherein R₂ is substituted or unsubstituted aryl, or substituted or unsubstituted heteroaryl.

Claims 2, 4, 5, 7-9, 23-27, 40, and 41 depend from Claim 1.

The Narr reference teaches 2,4,5,6-tetrasubstituted pyrimidine compounds with the following formula:



wherein R₂ is morpholino, thiomorpholino, 1-oxido-thiomorpholino, 1,1-dioxido-thiomorpholino, piperazino, or N'-[acetyl-(alkanoyl of 1 to 3 carbon atoms)-piperazino], and R₄ is hydrogen, chlorine, bromine, cyano, carbalkoxy of 2 to 4 carbon atoms, alkyl of 1 to 6 carbon atoms, mono(carbalkoxy of 2 to 4 carbon atoms)-alkyl of 1 to 6 carbon atoms, di(carbalkoxy of 2 to 4 carbon atoms)-alkyl of 1 to 6 carbon atoms, mercapto, allylmercapto, (alkyl of 1 to 6 carbon atoms)-mercapto, 1-oxidethiomorpholino, or -NHB, where B is hydrogen, alkyl of 1 to 3 carbon atoms, cyclohexyl, phenyl, chloro-phenyl, carboxy-phenyl, carbomethoxy-phenyl, or pyridyl.

In contrast to the claimed invention reciting R₂ as an aromatic substituent, the compounds in the Narr reference have R₂, which corresponds to the R₂ in the claimed invention, as a heterocyclic ring, i.e., a non-aromatic substituent. Therefore, the Narr reference fails to exactly

describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

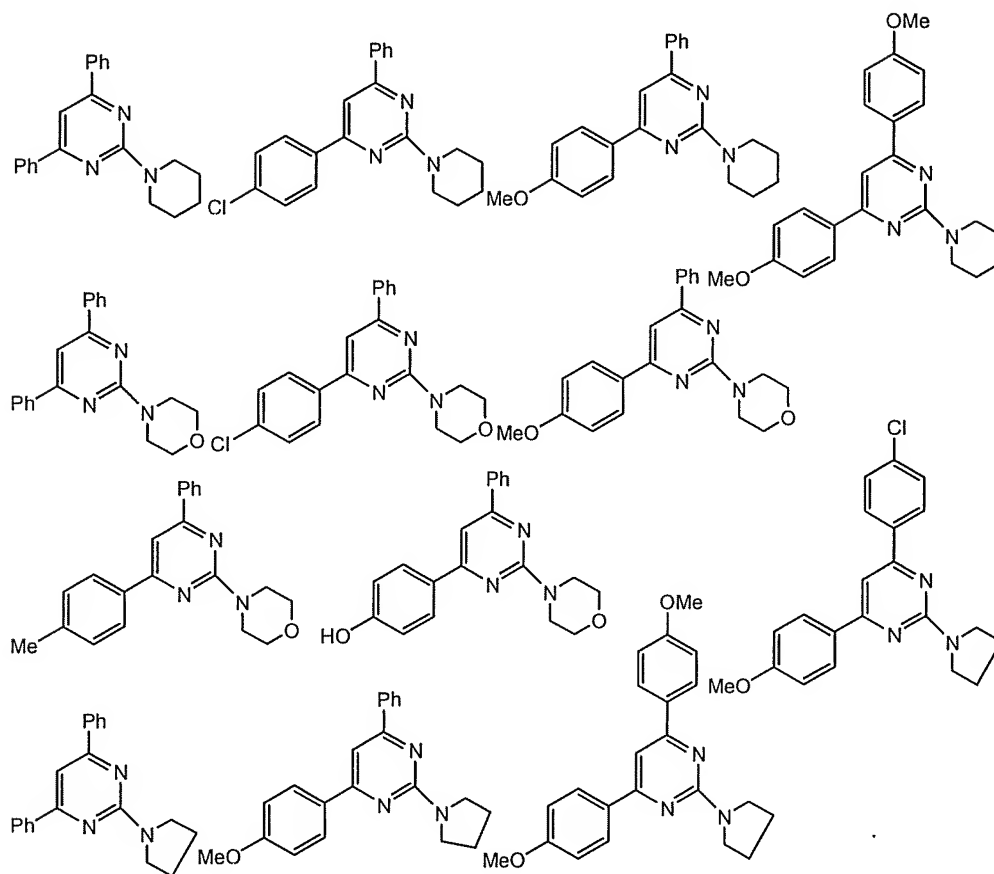
Furthermore, the Narr reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1, 2, 4, 5, 7-9, 23, 37, 40-42, and 44 under 35 U.S.C. §102(b)

Claims 1, 2, 4, 5, 7-9, 23, 37, 40-42, and 44 are rejected under 35 U.S.C. §102(b) as being anticipated by Sharma et al., *Indian Journal of Chemistry, Section B: Organic Chemistry including Medicinal Chemistry* 38B(8):966-968, 1999. CA 132:207818, 2000. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 2, 4, 5, 7-9, 23, 27, and 40-42 depend from Claim 1. Claim 44 has been canceled.

The Sharma reference discloses the following compounds:



In contrast to the claimed invention, in which Y is attached to the 4 or 6 position of the pyrimidine ring through X (not a direct link), the compounds disclosed by the Sharma reference have the aromatic substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Sharma reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

Furthermore, the Sharma reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

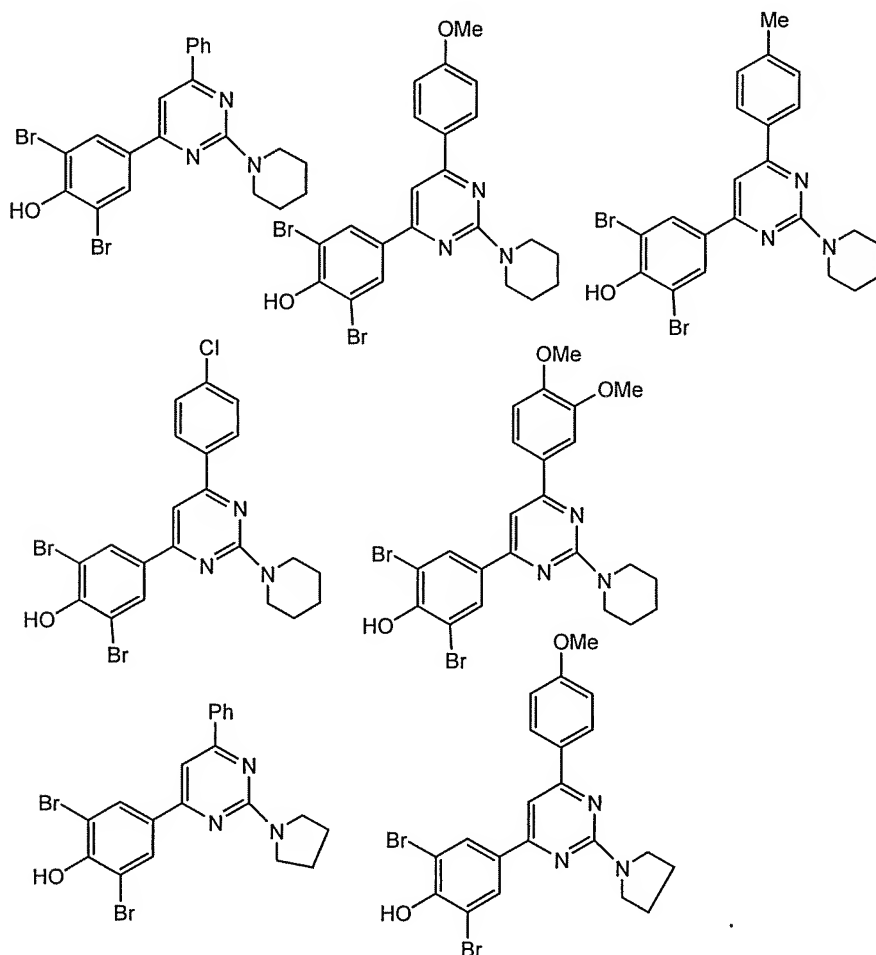
LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

The Rejection of Claims 1, 2, 4, 5, 7-9, 23, 37, 40-42, and 44 under 35 U.S.C. §102(b)

Claims 1, 2, 4, 5, 7-9, 23, 37, 40-42, and 44 are rejected under 35 U.S.C. §102(b) as being anticipated by Kothari et al., *Indian Journal of Heterocyclic Chemistry* 8(4):285-288, 1999. CA 131:257250, 1999. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 2, 4, 5, 7-9, 23, 37, and 40-42 depend from Claim 1. Claim 44 is canceled.

The Kothari reference discloses the following compounds:



LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X, the compounds disclosed by the Kothari reference have the aromatic substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 in the present invention has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Kothari reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

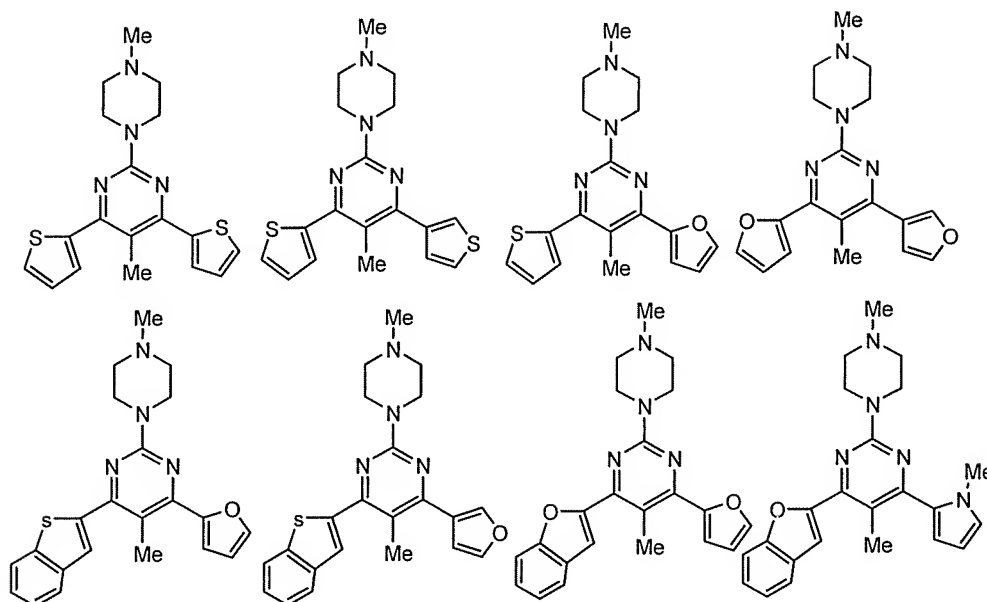
Furthermore, the Kothari reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1-3, 5, 6, 23 and 40 under 35 U.S.C. §102(b)

Claims 1-3, 5, 6, 23 and 40 are rejected under 35 U.S.C. §102(b) as being anticipated by Mokrosz et al., *Archiv der Pharmazie*, 328(9), 659-666, 1995. CA 124: 223, 1995. Withdrawal of the rejection is respectfully requested for the following reasons.

As noted above, Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 2, 3, 5, 6, 23-27, and 40 depend from Claim 1.

The Mokrosz reference discloses the following compounds:



In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X, the compounds disclosed by the Mokrosz reference have the aromatic substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Mokrosz reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

Furthermore, the Mokrosz reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

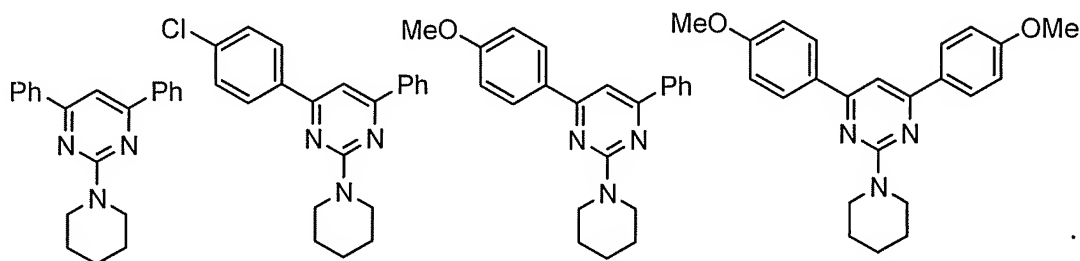
The Rejection of Claims 1, 23, and 40 under 35 U.S.C. §102(b)

Claims 1, 23, and 40 are rejected under 35 U.S.C. §102(b) as being anticipated by Sukhwal et al., *Indian Journal of Heterocyclic Chemistry* 4(1):67-68, 1994. CA 122: 105796, 1995. Withdrawal of the rejection is respectfully requested for the following reasons.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 23 and 40 depend from Claim 1.

The Sukhwal reference discloses the following compounds:



In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X, the compounds disclosed by the Sukhwal reference have the aromatic substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Sukhwal reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

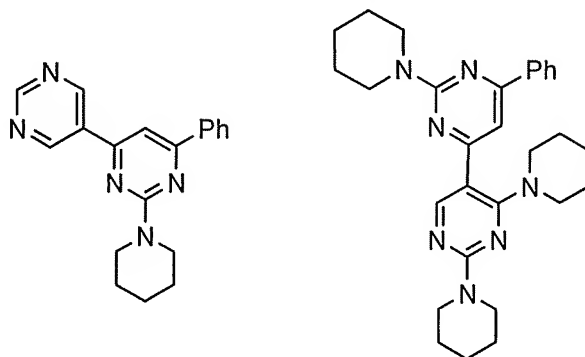
Furthermore, the Sukhwal reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1, 39, and 40 under 35 U.S.C. §102(b)

Claims 1, 39, and 40 are rejected under 35 U.S.C. §102(b) as being anticipated by Mikhaleva et al., *Khimiya Geterotsiklicheskikh Soedinenii* 6:621-626, 1979. CA 91: 107051, 1979. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 23 and 40 depend from Claim 1.

The Mikhaleva reference discloses the following compounds:



In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X, the compounds disclosed by the Mikhaleva reference have the substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Mikhaleva reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

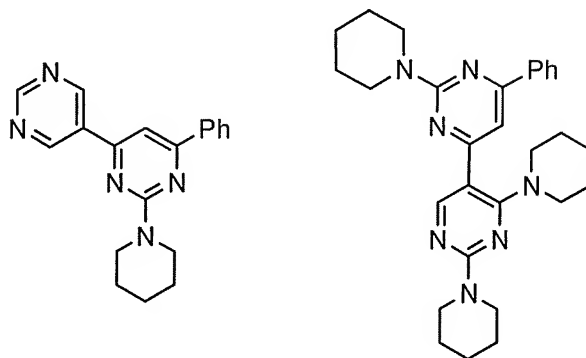
Furthermore, the Mikhaleva reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1-3, 5, 6, 9, 23, 40-42, 44, and 45 under 35 U.S.C. §102(b)

Claims 1-3, 5, 6, 9, 23, 40-42, 44, and 45 are rejected under 35 U.S.C. §102(b) as being anticipated by Tani et al., JP 49021148, CA 82: 140173, 1975. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 23 and 40 depend from Claim 1.

The Tani reference discloses the following compounds:



In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X (not a direct link), the compounds disclosed by the Tani reference have the substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Tani reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

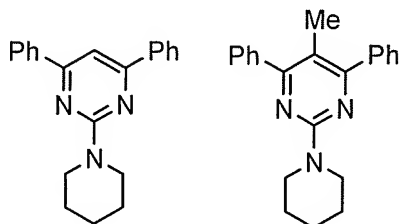
Furthermore, the Tani reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1, 23, and 40 under 35 U.S.C. §102(b)

Claims 1, 23, and 40 are rejected under 35 U.S.C. §102(b) as being anticipated by Mamaev et al., *Reaktsionnaya Sposobnost Organicheskikh Soedinenii* 5(3):824-837, 1968. CA 70: 76976, 1969. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 23 and 40 depend from Claim 1.

The Mamaev reference discloses the following compounds:



In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X, the compounds disclosed by the Mamaev reference have the substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Mamaev reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

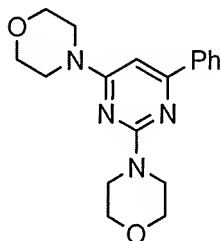
Furthermore, the Mamaev reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection of Claims 1, 2, 5-9, 23, 40-42, 44, and 45 under 35 U.S.C. §102(b)

Claims 1, 2, 5-9, 23, 40-42, 44, and 45 are rejected under 35 U.S.C. §102(b) as being anticipated by Falco et al., *British Journal of Pharmacology and Chemotherapy* 6:185-200, 1951. CA 46: 27482, 1952. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 23 and 40 depend from Claim 1.

The Falco reference discloses the following compound:



In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X, the compound disclosed by the Falco reference have the substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Falco reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

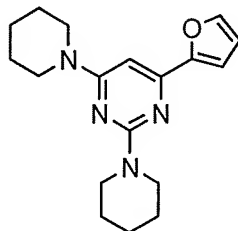
Furthermore, the Falco reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

The Rejection Claims 1, 23, and 40 under 35 U.S.C. §102(b)

Claims 1, 23, and 40 are rejected under 35 U.S.C. §102(b) as being anticipated by Andrisano, *Bollettino Scientifico della Facolta di Chimica Industriale di Bologna*, Volume Date 1944-1947, 5, 48-51. CA 44: 19897, 1950. Withdrawal of the rejection is respectfully requested for the following reasons.

Claim 1 has been amended to recite that the Y group is attached to the pyrimidine ring through X (not a direct link). Claims 23 and 40 depend from Claim 1.

The Andrisano reference discloses the following compound:



In contrast to the claimed invention in which Y is attached to the 4 or 6 position of the pyrimidine ring through X (not a direct link), the compound disclosed by the Andrisano reference has substituents directly attached to the 4 and 6 positions of the pyrimidine ring.

Because Claim 1 has been amended to recite a pyrimidine compound wherein Y group is attached to the pyrimidine ring through X, the Andrisano reference fails to exactly describe the invention as now claimed. Accordingly, the reference is not anticipatory, withdrawal of the rejection is respectfully requested.

Furthermore, the Andrisano reference fails to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed.

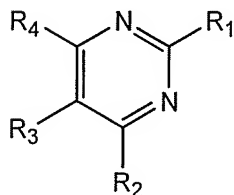
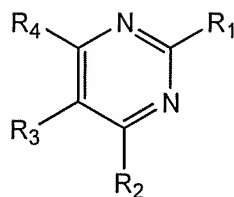
The Rejection of Claims 1-9, 17, 18, 23, 38, 40-42, and 44 under 35 U.S.C. §103(a)

Claims 1-9, 17, 18, 23, 38, 40-42 and 44 are rejected under 35 U.S.C. §103(a) as being unpatentable over the Narr reference. Withdrawal of the rejection is respectfully requested for the following reasons.

According to the Examiner, the Narr reference discloses 2,4,5,6-tetrasubstituted pyrimidine compounds and the compounds taught by the Narr reference are generically embraced in the claimed invention. Applicants respectfully disagree.

Claim 1 recites a pyrimidine derivative with R₂ as an aryl or heteroaryl substituent. Claims 8-9, 17, 18, 23, 38, and 40-42. Claim 44 is canceled.

As noted above, the Narr reference teaches 2,4,5,6-tetrasubstituted pyrimidine compounds with the following formulas:



wherein R_2 is morpholino, thiomorpholino, 1-oxido-thiomorpholino, 1,1-dioxido-thiomorpholino, piperazino, or N'-[acetyl-(alkanoyl of 1 to 3 carbon atoms)-piperazino], and R_4 is hydrogen, chlorine, bromine, cyano, carbalkoxy of 2 to 4 carbon atoms, alkyl of 1 to 6 carbon atoms, mono(carbalkoxy of 2 to 4 carbon atoms)-alkyl of 1 to 6 carbon atoms, di(carbalkoxy of 2 to 4 carbon atoms)-alkyl of 1 to 6 carbon atoms, mercapto, allylmercapto, (alkyl of 1 to 6 carbon atoms)-mercapto, 1-oxidothiomorpholino, or -NHB, where B is hydrogen, alkyl of 1 to 3 carbon atoms, cyclohexyl, phenyl, chloro-phenyl, carboxy-phenyl, carbomethoxy-phenyl, or pyridyl.

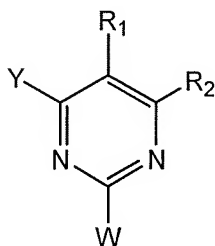
For the compounds disclosed by the Narr reference, the substituents (R_2 or R_4) that are directly attached to the 2 or 4 positions of the pyrimidine ring are not aromatic groups. In contrast, Claim 1 recites that R_2 , which is directly attached to the 4 or 6 position of the pyrimidine ring, is an aromatic substituent. The Narr reference does not teach or suggest R_2 as an aromatic substituent as in the claimed invention.

Because the cited reference fail to teach, suggest, provide any motivation to make, or otherwise render obvious the invention as now claimed, the claimed invention is nonobvious and patentable over the cited references. Withdrawal of the rejection is respectfully requested.

New Claims 47-58

Claims 47-58 have been added. As noted above, Claim 1 has been amended to exclude compounds of formula (I) where X is not a direct link. Claims 47-52 are directed to compounds of formula (I) where X is a direct link. Claims 47-52 define compounds within the scope of original Claim 1. Claims 53-58 relate to compositions and methods for treatment of breast cancer using the compounds of Claim 47.

Claim 47 recites a compound having the formula:

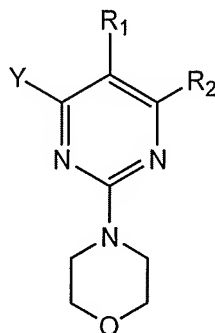


where Y is substituted or unsubstituted heterocyclyl, R₂ is substituted aryl, and W is substituted or unsubstituted morpholino. Claim 47 is directed to compounds that are a subgenus of the genus of the compounds of Claim 1 as originally filed where X is a direct link, and Y is substituted or unsubstituted heterocyclyl. Support for Claim 47 can therefore be found throughout the application as originally filed. See, for example, page 3, lines 8-page 4, line 14; page 43, line 26-page 44, line 28; and page 102, Claim 1.

Claim 48 depends from Claim 47 and is directed to specific heterocyclyl groups. Support for Claim 48 can be found throughout the application as originally filed. See, for example, page 11; page 72, representative compound 47; page 76, representative compound 71; page 77,

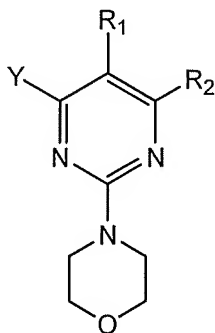
representative compounds 76, 80, and 81; page 78, representative compounds 87 and 88; and page 102, Claim 1.

Claim 49 recites a compound having the formula:



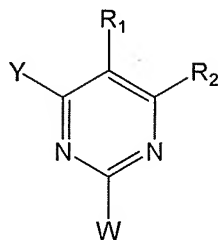
where Y is substituted or unsubstituted heterocyclyl, and R₂ is substituted phenyl, substituted pyridyl, or substituted pyrimidinyl. Support for Claim 49 can be found throughout the application as originally filed. See, for example, page 33, line 1.

Claim 50 recites a compound having the formula:



where Y is one of the three recited heterocyclyl groups. Support for Claim 50 can be found throughout the specification as originally filed. See, for example, page 11; page 77, representative compound 76; page 78, representative compounds 87 and 88; and page 110, Claim 10.

Claim 51 recites a compound having the formula:



where Y is substituted or unsubstituted morpholino, and R₂ is a substituted aryl. Claim 52 depends from Claim 51 and recited that W is substituted or unsubstituted morpholino. Support for Claims 51 and 52 can be found throughout the specification as originally filed. See, for example, page 11; page 72, representative compound 47; page 76, representative compound 71; and page 77, representative compound 81; and page 110, Claim 10.

Allowable Subject Matter

Claims 10, 11, 13-16, 19-22, 31, 32, 43, and 46 are objected to as being dependent upon a rejected base claim. The Examiner indicates that Claims 10, 11, 13-16, 19-22, 31, 32, 43, and 46 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 16 and 19-22 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Allowance of Claims 16 and 19-22 is respectfully requested.

Claim 10, 11, 13-15, 31, 32, 43, and 46 depend from Claim 1. As noted above, Claim 1 has been amended to recite that X is not a direct link. As amended, the compounds of Claim 1 are not anticipated by the cited references. Therefore, Claim 10, 11, 13-15, 31, 32, 43, and 46 depending from the amended Claim 1 are not anticipated by the cited references. Allowance of Claim 10, 11, 13-15, 31, 32, 43, and 46 is respectfully requested.

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESSTMLLC
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100

CONCLUSION

Applicants believe that Claims 1-27, 31, 32, 37-43, and 45-58 are in condition for allowance. If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicants' attorney at 206.695.1755.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}



George E. Renzoni, Ph.D.
Registration No. 37,919
Direct Dial No. 206.695.1755

GER:md

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue
Suite 2800
Seattle, Washington 98101
206.682.8100